AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on line 12 of page 1 as follows:

Fig. 25 shows an example of a schematic configuration of a so called axial flow ~~typegas~~ type gas laser oscillator. Referring to Fig. 25, the axial flow gas laser oscillator (hereinafter called AFGLO) is explained.

Please amend the paragraph beginning on line 24 of page 5 as follows:

As a measure against bending of DT base 170 by vacuum force, for example, it was attempted to ~~user~~ use a canceler for canceling the stress due to pressure difference in order to keep balance of stress due to pressure difference between inside and outside. However, the canceler generated an unexpected stress, and produced adverse effects.

Please amend the paragraph beginning on line 3 of page 6 as follows:

On the other hand, as a measure against the expansion and the shrinkage due to the temperature difference, it was attempted to control the DT base 170 at a constant temperature. This attempt is intended to pass liquid (for example, water) in the DT base 170, and control the liquid temperature to remain constant. However, the volume of the DT base 170 is large in order increase the rigidity. Therefore, the thermal capacity of the DT base 170 becomes larger, and the temperature difference cannot be completely eliminated ~~completely~~.

Please amend the paragraph beginning on line 17 of page 14 as follows:

Fig. 22 shows the relation between the distance of an auxiliary electrode and an electrode to which the auxiliary electrode is not connected, and the discharge start voltage in example 3 of the present ~~invention .~~ invention.

Please amend the paragraph beginning on line 21 of page 14 as follows:

Fig. 23 shows the relation between the resistance of the high resistance resistor coupling the auxiliary electrode and an electrode, the discharge start voltage and laser output in example 3 of the present ~~invention .~~ invention.

Please amend the paragraph beginning on line 7 of page 16 as follows:

An OPM holder 15a and an RM holder 15b are supported to be parallel to each other by a plurality of mirror holder connecting roads (hereinafter called MHCR) 14. A rotation support unit 200 is configured to support the OPM holder 15a on a DT base 17. A support unit 20a for supporting the OPM holder 15a to be vertical to the laser beam axis is disposed in the lower part of the OPM holder 15a. A rotary shaft support unit 20b is disposed on the DT base 17. A hole for inserting a rotary shaft 19 is ~~opened~~ disposed in the support unit 20a and rotary shaft support unit 20b. The rotary shaft 19 is inserted into the support unit 20a and rotary shaft support unit 20b, so that the OPM holder 15a and DT base 17 are assembled together. The contact portions of the rotary shaft 19 and rotary shaft support units 20a, 20b are finished to a smooth surface so as to rotate smoothly with minimum friction. Or a component extremely small in friction against rotation such as ball bearing (or roller bearing) is inserted. Thus, the rotary shaft 19, support unit 20a, and rotary shaft support unit 29b are combined to compose the rotation support unit 200 for supporting the OPM holder 15a on the DT base 17. The rotation support unit 200 has a degree of freedom in the rotating direction shown by an arrow 202 shown in Fig. 1 and Fig. 2.

Please amend the paragraph beginning on line 4 of page 17 as follows:

On the other hand, a support bar 21 is provided in the lower part of the RM holder 15b. At the DT base 17 side, a rotating element 22 and a rotating element support unit 23 for supporting the rotating element 22 are disposed for supporting the support bar 21. In this manner, a slider structure 220 slidable in the optical axis direction is formed. This slider structure 220 has a degree of freedom in the optical axis direction shown by an arrow ~~302~~ 222 in Fig. 1 and Fig. 2.

Please amend the paragraph beginning on line 9 of page 19 as follows:

~~Fig. 4 shows~~ Figs. 4A-4C show detailed views of junction of OPM holder and DT support unit of a laser oscillator of another configuration of the present embodiment. The rotary shaft 19, support unit 20a, and rotary shaft support unit 20b are combined without clearance (without gap). However, if completely free from gap, rotation is not smooth due to friction. As mentioned above, by inserting a ball bearing in the contact portions of the rotary shaft 19, support unit 20a, and rotary shaft support unit 20b, it is substantially free from clearance to the parallel direction to the optical axis direction. Besides, as being pushed down by the own weight of the mirror holder, the central axis of the discharge tube and optical axes of the mirrors, and a relative position between the mirrors are hardly changed and are stable. However, concerning the direction vertical to the optical axis, a gap is needed for smooth rotation between the support unit 20a and rotary shaft support unit 20b. To prevent looseness due to this gap, an elastic force is employed to push the upper rotary shaft support unit 20a to the lower rotary shaft support unit 20b at one side. ~~Fig. 4 shows~~ Figs. 4A-4C show an example of such structure. For example, two spring members 24 are symmetrically disposed on both sides of the rotary shaft, and the elastic force of the spring members 24 is applied to the support unit 20a. Between a spring holder 25 provided on the rotary shaft 19 and the upper rotary shaft member 20a, the spring members 24 are placed ~~shrinked~~ compressed. Besides, in order that the spring holder 25 and spring members 24 may not impede the motion in the rotating direction, a rotating element such as pillow ball 26 is inserted in the junction between the rotary shaft 19 and spring holder 25..

Please amend the paragraph beginning on line 21 of page 20 as follows:

~~Fig. 5 is a detailed view~~ Figs. 5A and 5B are detailed views of an optical bench of laser oscillator showing still another configuration of the present embodiment.

Please amend the paragraph beginning on line 11 of page 21 as follows:

The optical bench stabilizing effect by inserting the ribs 27 is explained. When the DT base 17 id deformed by vacuum force or temperature change, in particular, when expanded or ~~shrinked~~ shrunk by temperature change, the following effects occur. At this time, in the coupling portion of

the mirror holder and DT base 17, a linear displacement occurs in the ~~the~~ optical axis direction. However, the pillow balls are free to move because sliding occurs between the pillow balls and the shaft passing through the pillow balls. Accordingly, the RM holder is free in this direction. Therefore, any force causing change in parallelism does not occur on the mirror holder due to thermal stress. However, even if a friction is reduced so as to be freely movable structurally, actually, the friction is not zero. The junction of the rear mirror holder 15b and DT base 17 is pushed in the direction of gravity (that is, in the downward direction in Fig. 5) due to the own weight of the rear mirror holder 15b. Therefore, a frictional force occurs in this portion, strictly speaking. On the MHCR 14, too, a tensile or compressive force works in the optical axis direction. The MHCR 14 is a circular ~~colum~~ column of about 50 mm in diameter, and 1000 to 2000 mm in length. When tensile or compressive force works in the optical axis direction (that is, in the longitudinal direction of MHCR 14), the MHCR 14 deflects. At this time, if ribs 27 are not disposed, each MHCR 14 is bent in an arbitrary direction. As a result, the parallelism of the OPM holder 15a and RM holder 15b is broken.

Please amend the paragraph beginning on line 2 of page 31 as follows:

As described above, in the prior art shown in Fig. 31, the auxiliary electrode 156 was disposed near the electrode 2 in the DT 1, and the auxiliary electrode 156 and the electrode 3 were connected through a high resistance resistor of several MΩ. In this case, since the distance between the auxiliary electrode and the negative electrode is too long, ~~inonized~~ ionized gas is mostly recombined before reaching ~~thenegative electrod~~ the negative electrode, even if the laser gas is ionized before, and notable effect was not obtained.

Please amend the paragraph beginning on line 11 of page 31 as follows:

In the ~~presenmt~~ present invention, by contrast, when the distance between the two electrodes is defined as L, the auxiliary electrode is disposed at a position of 0.4L to 0.7L from an electrode to which the auxiliary electrode is not connected. Fig. 22 shows the relation between the distance of auxiliary electrode and the electrode to which the auxiliary electrode is not connected, and the

discharge start voltage. As Fig. 22 shows, when the distance is shorter than 0.4L, the ionized laser gas recombines, and the effect of reducing the discharge start voltage is not obtained. If the distance is longer than 0.7L, on the other hand, since the distance between the positive electrode and the auxiliary electrode is too long, the discharge start voltage climbs up. Accordingly, an appropriate distance between the auxiliary electrode and the electrode to which the auxiliary electrode is not connected is in a range of 0.4L to 0.7L.

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A laser oscillator comprising:

a. a discharge tube for exciting laser medium disposed inside by applying energy;

b. a first mirror and a second mirror disposed on an optical axis of laser beam emitted from the laser medium excited by said discharge tube;

c. a first mirror holder and a second mirror holder for holding said first mirror and second mirror respectively;

d. a plurality of mirror holder connecting members for connecting said first mirror holder and second mirror holder,

e. a discharge tube support for supporting said discharge tube,

f. a first fixing part for fixing said first mirror holder to the discharge tube support in a laser beam axial direction and in a vertical direction to the laser beam axis, said first fixing part having a degree of freedom in the rotating direction within the plane including the laser beam axial direction; and

g. a second fixing part for fixing said second mirror holder to the discharge tube support in the vertical direction to the laser beam axis, said second fixing part being slidable in the laser beam axial direction.

2. (Withdrawn) A laser oscillator comprising:

a. a discharge tube for exciting laser medium disposed inside by applying energy;